

APR 25 2007

Application No.: 10/619,408

Docket No.: SIW-063RCE

REMARKS

Applicants amend claim 4 to incorporate the limitations in claim 6. Claims 6 and 7 are canceled. New claim 14 is added. No new matter is added. Upon entry of this amendment, claims 4-5, 10-11, and 14 are pending, of which claims 4 and 14 are independent. Applicants respectfully submit that the pending claims define over the art of record.

The Claimed Invention

Claim 4 recites a method of generating electrical current in a fuel cell vehicle. The method includes the use of two different power generation modes: an idle charge mode and an idle stop mode. When an idle charge mode is selected, the fuel cell generates electrical current according to an optimum power generation efficiency. Hence, increased fuel efficiency can be achieved while the fuel cell vehicle is traveling. When an idle stop mode is selected, electrical generation by the fuel cell is stopped, but the fuel cell vehicle can keep traveling and the auxiliary equipment are still kept driven. Accordingly, when the idle stop mode is unintentionally executed by a driver, the driver does not feel something is wrong since the fuel cell vehicle can be still traveling and the driving of the auxiliary equipment is still continued.

Claim Rejection Under 35 U.S.C. §103

Claims 4-7, 10, and 11 are rejected under 35 U.S.C. §103(a) as being unpatentable over United States Patent No. 6,158,537 to Nonobe (hereafter "Nonobe") in view of United States Patent No. 6,777,909 to Aberle et al. (hereafter "Aberle"). Applicants respectfully submit that the combination of the Nonobe reference and the Aberle reference do not teach or suggest the limitation of using the power storage device to supply electrical power to the driving motor or the auxiliary equipment, as recited in amended independent claim 4.

The Nonobe Reference

The Nonobe reference teaches that when a voltage V of the storage battery 30 is greater than a reference voltage V0, the CPU 52 determines that the storage battery 30 is in a sufficient charge state and disconnects the fuel cells from the auxiliary machinery 34. The fuel cells stop

Application No.: 10/619,408

Docket No.: SIW-063RCE

power generation and the auxiliary machinery is stopped with no supply of electric power. In addition, the power supply system 10 completely stops its operation. See Col. 12, lines 31-41.

In contrast, the claimed invention requires that in an idle stop mode, generation of electrical current by the fuel cell is stopped, and the power storage device is used to supply electrical power to the driving motor or the auxiliary equipment. In other words, electrical supply is not stopped in an idle stop mode when power generation of fuel cell is stopped.

The Aberle Reference

The Aberle reference discloses that in a fuel cell system, when power demand rises, for example in order to accelerate a vehicle, power from the temporary power store may be used to supply current on top of the electrical power generated by the fuel cell. The Aberle reference discloses that when there is excess power generated by the fuel cell, the excess power can be stored in the temporary power store. There is no teaching or suggestion that the temporary power store may be used to supply electrical power when power generation of fuel cell is stopped.

Accordingly, combination of the Nonobe reference and the Aberle reference do not teach or suggest the limitation of using the power storage device to supply electrical power to the driving motor or the auxiliary equipment, as recited in amended independent claim 4. Applicants respectfully request that the Examiner reconsider and withdraw the rejection of independent claim 4.

Applicants note that the dependent claims also recite patentable subject matter. As such, for this and the reasons set forth above, the dependent claims also define over the art of record.

New Claim

New claim 14 is added. Claim 14 also recites the limitation of using the power storage device to supply electrical power to the driving motor or the auxiliary equipment, which is not taught or suggest by the combination of the Nonobe reference and the Aberle reference as set forth above. As such, claim 14 defines over the art of record.

APR 25 2007

Application No.: 10/619,408

Docket No.: SIW-063RCE

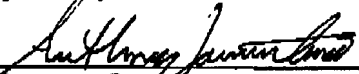
CONCLUSION

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Applicants believe no fee is due with this statement. However, if a fee is due, please charge our Deposit Account No. 12-0080, under Order No. SIW-063RCE from which the undersigned is authorized to draw.

Dated: April 25, 2007

Respectfully submitted,

By 

Anthony A. Laurentano

Registration No.: 38,220

LAHIVE & COCKFIELD, LLP

One Post Office Square

Boston, Massachusetts 02109-2127

(617) 227-7400

(617) 742-4214 (Fax)

Attorney For Applicant